DFM Series Coating Stenter Introduction

1.1, Overview

Hangzhou Honghua Digital Technology Stock Co., Ltd. is a professional company specialized in R&D, manufacturing digital textile printing equipment. in the textile field the capacity of its R&D and technology has reached the leading position in the world. DFM-B Series Coating Stenter successful development, for our company's digital printing equipment (blanket printing machine) pre-treatment and post-treatment formed a professional series production possible.The Coating Stenter DFM Series has a full-featured, economical and practical, easy to operate, cost-effective advantages. DFM Series Coating Stenter apply to small quantities of silk, cotton and other fabric coating, drying stentering type-shaping .Drying shape heating system uses infrared heater with high heat efficiency advantages.

Please read this machine instruction carefully before operate it, so as to avoid operational errors or damage the machine. If problems occurred when the machine working .It should be maintained by the professional maintenance personnel or contact with our company in time, we will endeavor to provide excellent after-sales service.

1.2、Working principle

DFM Series Coating Stenter whole machine composed of coating rolling cart, edge seaking and stentering,take-up unit infrared heating system and the bottom frame.

The transmission of Coating Mangle and edge-searching stenter composed by a set of frequency control system, a three-phase asynchronous motor with speed reducer, a mechanical speed controller ,Easy for user to adjust the speed to match with Mangle and edge-searching Stenter .

Take-up unit consists of a independent DC motor through reducer to drive , its starting and stopping by a winding upper and lower position through the switch PLC1 (programmable logic controller) control procedures

Edge-seaching device consists of the edge detection electric-optical switch,the

maximun limit switches of arm and the limit switch of insurance , and linear motor. The entire system is detected by the photoelectric switch fabric side of the signal sent to the PLC2 (programmable logic controller) for processing. Output of an intermittent pulse voltage signal to drive the linear motor movement in order to achieve automatic side-seaking purposes.

Infrared heating system uses the principle of infrared heating tubes with electricity, the heating system is composed of nine long-infrared heating tubes and nine short-infrared heating tubes, according to the width of the fabric the user can choose the right Infrared tube to operate the heating and drying .

1.3、Main Technical Specifications

DFM small size Coating Stenter main technical sepcifications in Table 1-1

Table1-1

Model / Specifications	**DFM-2200B**	**DFM-1600B**
Fabric width range	800—2200mm	800—1600mm
Fabricmovingspeed	0—1m / min	0—1m / min
Infrared tube Consumption	18kilowatts /9kilowatts	13.5kilowatts
Dimension（mm）	4360（length）×2870（width）×1200（height）	4360（length）×2220（width）×1200（height）
Power Supply for Installation	18.5kilowatts	14kilowatts

1.4、Main components

1.4.1 DFM small size coating Stenter the main components

DFM small size coating Stenter the main composed components of Figure 1-1.

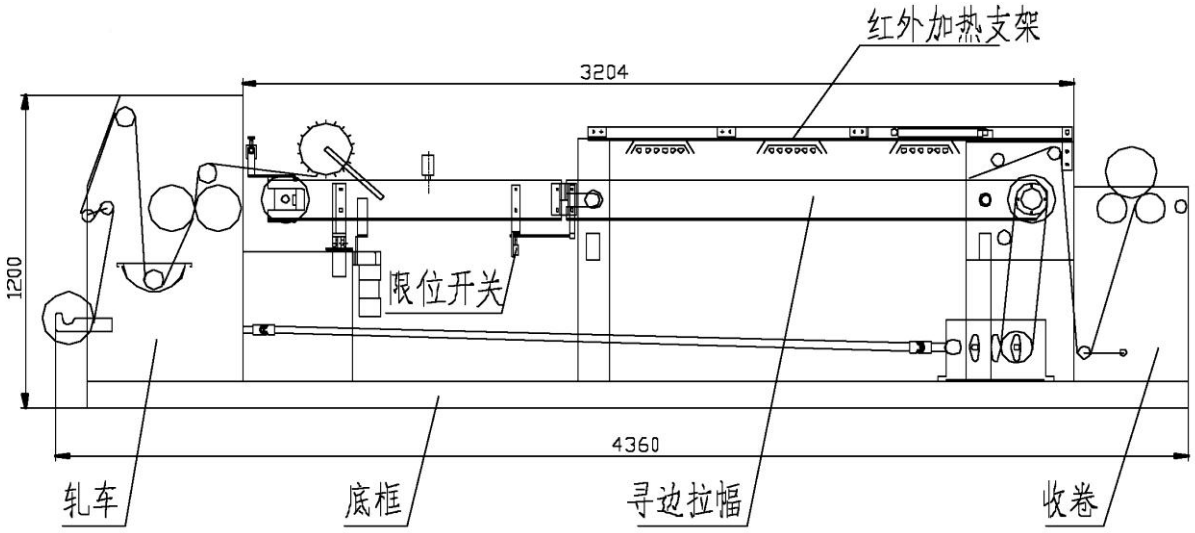


图 **1-1**

Part names and functions of major components shown in Table 1-2.

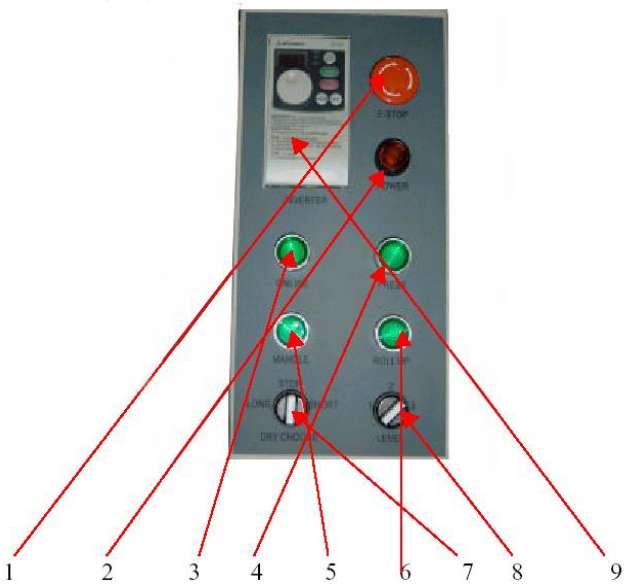
NO.	Part name	Consist of	Function
1	Mangle	Slurry tank、press-roller、roll -cylinder	To complete the fabric soaked pulp, rolling pulp.Roll pressure from the pneumatic system. Roller speed can be arbitrarily adjusted, its speed depends on the fabric drying rate.
2	Edge-Seeking Stenter	two pin boards composed	According fabric width adjust the two pin boards distance.The pin boards speed synchronal with the roller byadjusting continuous variable transmission .CVT handwheel clockwise rotation changes the pin boards speed more fast。At the feeding two pin boards components can auto track the fabric edge，make the fabric do not go beyond pins.
3	Take-up Rewinding	two rough surface rubber rollers,swing	rough surface rubber roller gap rotation，when the swing roller to reach the lowest the limit switch

		roller composed.	control the running of re-winding motor .
4	Infrared Heating Frame	Consist of three heaters	DFM-2200BHeater has long and short three heating pipes seperate.
5	Bottom frame	Formed by channel steel structure	bottom frame is the basis of installed the above four parts

1.4.2 DFM small size coating Stenter operation panel

1.4.2.1 Mangle, stentering operation panel

The Mangle, stentering operation panel shown in figure 1-2.



1-2

The Mangle, stentering operation panel buttons name and function shows in Table 1-3.

Table **1-3**

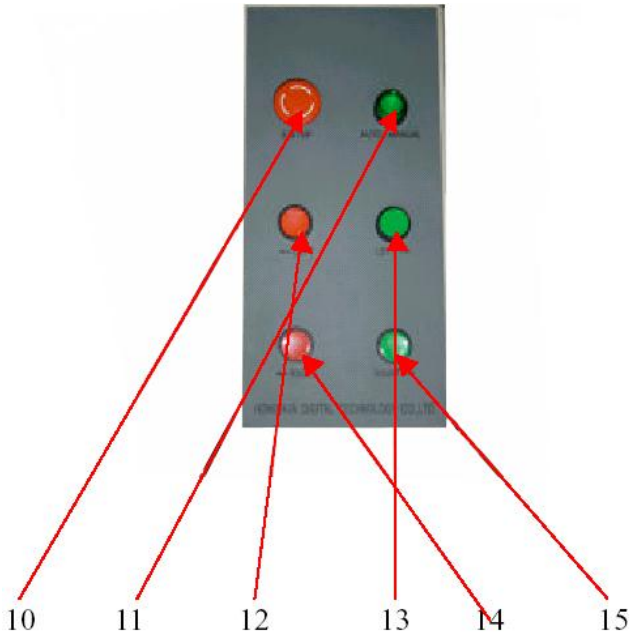
NO.	Part name	Function
1	Emergency stop botton （E-STOP）	When this machine in abnormal urgent situation press this button For urgent cutting down the power in case of abnormalities. Note: Normal operation can't press this button for shutting down. After pressed this button and the professional

		technical engineer remove the fault later can clockwise rotate the red knob gently.
2	Power switch Knob （POWER）	To control the machine power on and off. When this machine connected to the power the knob of the red light will be bright
3	Jiont button （ONLINE）	By PLC1 (programmable logic controller) program controlling , A joint on or off button can control the roller button, rolling cart button , rewinding button . Its function is equivalent to in turn operate pressing roller, rolling carts and rewinding buttons.
4	Pressure roller button （PRESS）	Control feeding pressure roller compaction and release operation . **Note: before pressing this button make sure nobody's hands have left in the danger zone of the pressure roller.**
5	Mangle button （MANGLE）	Control mangle roller and pin board motor running and stop.
6	Take-up botton （ROLL UP）	Control re-winding rough rubber roller running and stop.
7	Drying choose button (DRY CHOOSE)	Control the infrared heaters on and off and infrared heating tube choose a long tube or a short tube to heat. This self-locking knob is the three-position selector switch. Of its three positions were long, short and stopped.
8	Group number knob （LEVEL）	Power control infrared heating tubes number. This self-locking knob for the three-position selector switch. And drying selection knob used conjunction to achieve the best drying results.
9	Inverter （INVERTER）	Control the mangle motor working frequency. by adjusting the inverter's operating frequency to achieve control the mangle and stenter pin board running speed. Inverter can be easily adjust the

		machine running speed . Note: In order to keep the motor running in the best condition, the inverter maximum operating frequency set at 60Hz, please do not modified the parameters arbitrary.

1.4.2.2 Edge-finding device operation panel

Edge-finding device operation panel shown in figure 1-3



1-3

Edge-Seaking device operation panel parts descriptions and functions show in table 1-4

表 **1-4**

Table1-4

No.	Part Description	Function
10	Emergency Shutdown button （E-STOP）	The function is same as No.1 described in Table1-2,
11	AUTO/MANUAL button	When we press the self-locking LIGHT button, the green light should be bright and is in auto edge-seeking

	（AUTO/MANUAL）	state, when the lights go out, the instructions of seeking side beyond the machine's specified scope of the swing arm maximum swing amplitude.At this moment the operator should bounce this button.Adjust the beyond scope arm manually to the set scope for searching edges . Note: Because the side-seeking arm swinging scope is limited. While the operator operate the coating stenter .Try best feed fabrics to the machine's central axis .In order to help users locate the machine axis.The machine accompanied with a ruler.
12	Left Arm moving left button. （←LEFT）	Manual control mode to move mthe left arm to the left click button
13	Left Arm moving right button （LEFT →）	Manual control mode to move the left arm to the right click buttons
14	Right Arm moving left button （←RIGHT）	Manual control mode to move the right arm to the left click button
15	Right arm moving right button （RIGHT→）	Manual control mode to move the right arm to the right click buttons

1.4.2.3 post -operation panel button

Post operation panel button shows in the figure 1-4.

1-4

Post operation panel button name and function shows in Table1-5

1-5

No.	Part discription	Function
16	Emergency Stop （E-STOP）	The function is same as No.1 described in Table1-2.
17	Roll-up button. （ROLL UP）	The function is same as No.6 described in Table1-2.